

Take 5 for Safety

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CAS for Safety of Accelerator Facilities, DOE Order 420.2C

- **“the contractor must demonstrate to the satisfaction of the Field Element Manager that the following processes are in place:**
 - a. **A Contractor Assurance System (CAS) that maintains an internal assessment process**
 - b. **A Facility Configuration Management Program that is related to accelerator safety**
 - c. **Credited controls and appropriate administrative processes related to accelerator safety (e.g. training, procedures, etc.)”**

DOE O 420.2C CAS and Subject Areas at the Institutional Level

- **BNL Subject Area:** A topic identified as being part of BNL's work processes; contains requirements and general guidance
- **About 7 Subject Areas address institutional CAS relevant to accelerator safety Order (DOE O 420.2C)**
 - Conduct of Operations (training and procedures)
 - Facility Hazard Analysis (relationship between risk and controls)
 - Document Control (safety bases and authorizations)
 - Accelerator Safety (SAD, ASE, USI Process, Exemption Process)
 - Engineering Design (Credited Controls)
 - Configuration Management (Credited Controls)
 - Interlock Safety for High Risk Hazards (Credited Controls)
- **About 160 Subject Areas address CAS for control of standard industrial hazards covered in 10CFR851 and 10CFR835**

Credited Controls at the C-AD Accelerator Facility Level

- Radiation Shielding
- Access Controls Systems
- Ventilation Systems
- Stack Monitoring Systems
- ODH Monitoring, Alarm and Shutoff Valve Systems
- Soil Caps

CAS Internal Assessment Process Related to DOE Order 420.2C

- **C-AD's USI Process is a CAS**
 - Procedure changes are reviewed for impact on Credited Controls
 - Design Review Questionnaire begins an assessment process for new projects or modifications to review impact on existing Credited Controls or help determine the need for additional Credited Controls
 - Work Planning and Control for Experiments and Operations begins a process to review jobs and experiments for impact on existing Credited Controls
 - Critique/Occurrence procedures begin a process to examine events to determine if they resulted from failures in Credited Controls or are outside the ASE or safety bases in the SAD
- **Document Control is a CAS and it is applied to drawings, safety analyses, calibration records, procedures and authorizations associated with tangible Credited Controls**